**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-15 (Cancelled without prejudice or disclaimer).

16. (Original) In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

scanning means for scanning said indicia and generating image data indicative of the data encoded therein;

a parameter memory space for storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space for storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing means for executing a plurality of decoding programs in an attempt to decode said image data, said processing means being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

17. (Original) The reading apparatus of claim 16, in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

18. (Original) The reading apparatus of claim 17, in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

19. (Original) In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

an imaging assembly including a solid state image sensor reading said indicia and generating image data indicative of the data encoded therein;

a parameter memory space storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing means for executing a plurality of decoding programs in an attempt to decode said image data, said processing means being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

20. (Currently Amended) The reading apparatus of claim 19[[,]] in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

21. (Currently Amended) The reading apparatus of claim 20[[,]] in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

Claims 22-24 (Cancelled without prejudice or disclaimer).

25. (Previously Presented) In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

an imaging assembly including a two-dimensional solid state image sensor reading said indicia and generating image data indicative of the data encoded therein;

a parameter memory storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing circuit for executing a plurality of decoding programs in an attempt to decode said image data, said processing circuit being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

26. (Currently Amended) The reading apparatus of claim 25[[,]] in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

27. (Currently Amended) The reading apparatus of claim 26[[,]] in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

Claim 28 (Cancelled without prejudice or disclaimer).

29. (Currently Amended) The reading apparatus of claim 25[[,]] in which said menuing program allows a user to modify said parameter table by presenting to the reading apparatus optically readable menu symbols selected by the user.

30. (Currently Amended) The reading apparatus of claim 29[[,]] further including a random access memory (RAM) and an erasable read only memory (EROM), in which the parameter table and the menuing program are stored in said (EROM) when the reading apparatus is scanning and decoding data, and in which user selected modification to said parameter table are made by transferring the parameter table to said RAM, modifying the parameter table in RAM, and then transferring the modified parameter table back to said EROM.

31. (Previously Presented) The reading apparatus of claim 25, further including a random access memory (RAM) and an erasable read only memory space (EROM), in which the parameter table and the menuing program are stored in said EROM when the reading apparatus is scanning and decoding data, and in which parameter and menuing program data transmitted by said external data source are stored in said RAM before being transferred to said EROM.

32. (Currently Amended) The reading apparatus of claim 31[[,]] in which program data received from said external data source is organized into program data blocks, and in which

said data blocks are transferred to said EROM on a block by block basis, whereby part of said EROM may be reprogrammed without reprogramming the whole of said EROM.

33. (Currently Amended) The reading apparatus of claim 32[[,]] in which the parts of said EROM that store said program data blocks are erased immediately prior to the time that program data blocks are stored therein.

34. (Previously Presented) The reading apparatus of claim 25, in which said parameter table includes a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding.

35. (Currently Amended) The reading apparatus of claim 34[[,]] in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

36. (Currently Amended) The reading apparatus of claim 35[[,]] in which said parameter table includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

37. (Currently Amended) The reading apparatus of claim 25[[,]] in which said parameter table includes a plurality of scanning-decoding options that specify the relationships that may exist between the scanning and decoding activities of said apparatus.

38. (Currently Amended) The reading apparatus of claim 37[[,]] in which said scanning-decoding options include at least one tracking option.

39. (Currently Amended) The reading apparatus of claim 37[[,]] in which said scanning decoding options include at least one non-tracking option.

40. (Previously Presented) The apparatus of claim 25, wherein said external data source comprises a remote host processor that is coupled to said I/O device through a data transmission link.

41. (Currently Amended) The reading apparatus of claim 37[[,]] in which said scanning-decoding options include at least one of a One Shot option and a Repeat Until Done option.

42. (Currently Amended) The reading apparatus of claim 41[[,]] in which said scanning-decoding options include at least one of a Scan On Demand Option and a Skip Scan option.

Claims 43-51 (Cancelled without prejudice or disclaimer).

52. (Currently Amended) The reading apparatus of claim 19[[,]] in which said menuing program allows a user to modify said parameter table by presenting to the reading apparatus optically readable menu symbols selected by the user.

53. (Currently Amended) The reading apparatus of claim 52[[,]] further including a random access memory (RAM) and an erasable read only memory (EROM), in which the parameter table and the menuing program are stored in said (EROM) when the reading apparatus is scanning and decoding data, and in which user selected modification to said parameter table are made by transferring the parameter table to said RAM, modifying the parameter table in RAM, and then transferring the modified parameter table back to said EROM.

54. (Previously Presented) The reading apparatus of claim 19, further including a random access memory (RAM) and an erasable read only memory space (EROM), in which the parameter table and the menuing program are stored in said EROM when the reading apparatus is scanning and decoding data, and in which parameter and menuing program data

transmitted by said external data source are stored in said RAM before being transferred to said EROM.

55. (Currently Amended) The reading apparatus of claim 54[[,]] in which program data received from said external data source is organized into program data blocks, and in which said data blocks are transferred to said EROM on a block by block basis, whereby part of said EROM may be reprogrammed without reprogramming the whole of said EROM.

56. (Currently Amended) The reading apparatus of claim 55[[,]] in which the parts of said EROM that store said program data blocks are erased immediately prior to the time that program data blocks are stored therein.

57. (Currently Amended) The reading apparatus of claim 19[[,]] in which said parameter table includes a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding.

58. (Currently Amended) The reading apparatus of claim 57[[,]] in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

59. (Currently Amended) The reading apparatus of claim 58[[,]] in which said parameter table includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

60. (Currently Amended) The reading apparatus of claim 19[[,]] in which said parameter table includes a plurality of scanning-decoding options that specify the relationships that may exist between the scanning and decoding activities of said apparatus.

61. (Currently Amended) The reading apparatus of claim 60[[,]] in which said scanning-decoding options include at least one tracking option.

62. (Currently Amended) The reading apparatus of claim 60[[,]] in which said scanning decoding options include at least one non-tracking option.

63. (Previously Presented) The apparatus of claim 19, wherein said external data source comprises a remote host processor that is coupled to said I/O device through a data transmission link.

64. (Currently Amended) The reading apparatus of claim 60[[,]] in which said scanning-decoding options include at least one of a One Shot option and a Repeat Until Done option.

65. (Currently Amended) The reading apparatus of claim 64[[,]] in which said scanning-decoding options include at least one of a Scan On Demand Option and a Skip Scan option.

66. (Previously Presented) A reading apparatus for scanning and decoding bar code image data that is encoded in one of a plurality of types of bar code symbologies, said reading apparatus comprising:

an imaging assembly including a solid state two dimensional image sensor, said imaging assembly including optics for focusing an image of a bar code symbol onto said solid state two dimensional image sensor;

a housing shaped to fit into a human hand, said reading apparatus being constructed so that components of said imaging assembly are supported within said housing;

a trigger for actuation by a user of said reading apparatus;

a memory for storing image representations of said bar code symbol corresponding to said image focused onto said solid state image sensor, said memory further storing a plurality of bar code symbology decoding programs;

a processing circuit configured to execute said plurality of bar code symbology decoding programs for attempting to decode said image representations;

a user interface facilitating selection by user between a first and second operating modes,

wherein said reading apparatus is configured so that when said first operating mode is selected by a user, said apparatus is configured to store a fixed number, M, of said image representations into said memory within a time period T after actuation of said trigger;

wherein said reading apparatus is further configured to control said imaging assembly so that when said second operating mode is selected by a user, said apparatus is configured to store a variable number, N, of said image representations into said memory within said time period T after actuation of said trigger.

67. (Previously Presented) The reading apparatus of claim 66, wherein said user interface includes circuitry enabling said reading apparatus to read and recognize a menu symbol for selecting one of said first and second operating modes.

68. (Previously Presented) The reading apparatus of claim 66, wherein said user interface includes circuitry enabling said reading apparatus to receive a parameter designating one of said first and second operating modes from a spaced apart host processor.

69. (Previously Presented) The reading apparatus of claim 66, wherein said two dimensional image sensor is a CMOS image sensor.

70. (Previously Presented) The reading apparatus of claim 66, wherein said reading apparatus is configured to successively store into said memory a plurality of equal sized image representations into said memory in response to actuation of said trigger.

71. (Previously Presented) The reading apparatus of claim 66, further including at least one LED for illuminating said bar code symbol.

72. (Currently Amended) A reading apparatus for scanning and decoding bar code image data that is encoded in one of a plurality of types of bar code symbologies, said reading apparatus comprising:

an imaging assembly including a solid state two dimensional image sensor, said imaging assembly including optics for focusing an image of a bar code symbol onto said solid state two dimensional image sensor;

a housing shaped to fit into a human hand, said reading apparatus being constructed so that components of said imaging assembly are supported within said housing;

a trigger for actuation by user of said reading apparatus;

a memory for storing image representations of said bar code symbol corresponding to said image focused onto said solid state image sensor, said memory further storing a plurality of bar code symbology decoding programs;

a processing circuit configured to execute said plurality of bar code symbology decoding programs for attempting to decode said image representations;

a user interface facilitating selection by [[a]] user between a first and second operating mode[[s]],

wherein said reading apparatus is configured so that when said first operating mode is selected by a user said apparatus stores a fixed number, M, of said image representations into said memory within a time period T after actuation of said trigger independent of a speed with which reading apparatus attempts to decode said image representations;

wherein said reading apparatus is further configured so that when said second operating mode is selected by a user a number of said image representations that said apparatus stores into said memory within said time period T after actuation of said trigger varies depending on a speed with which said apparatus attempts to decode said image representations.

73. (Previously Presented) The reading apparatus of claim 72, wherein said user interface includes circuitry enabling said reading apparatus to read and recognize a menu symbol for selecting one of said first and second operating modes.

74. (Previously Presented) The reading apparatus of claim 72, wherein said user interface includes circuitry enabling said reading apparatus to receive a parameter designating one of said first and second operating modes from a spaced apart host processor.

75. (Previously Presented) The reading apparatus of claim 72, wherein said two dimensional image sensor is a CMOS image sensor.

76. (Previously Presented) The reading apparatus of claim 72, wherein said reading apparatus is configured to successively store into said memory a plurality of equal sized image representations into said memory in response to actuation of said trigger.

77. (Previously Presented) The reading apparatus of claim 72, further including at least one LED for illuminating said bar code symbol.